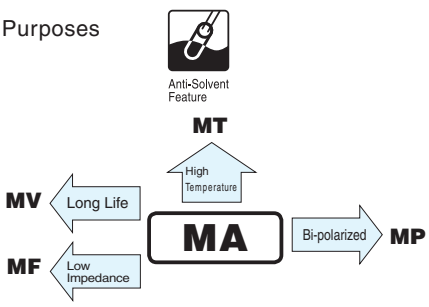
ALUMINUM ELECTROLYTIC CAPACITORS

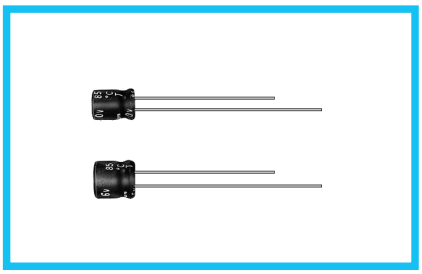
nichicon

MA series

5mmL, Standard, For General Purposes

- Standard series with 5mm height.
- Compliant to the RoHS directive (2011/65/EU).

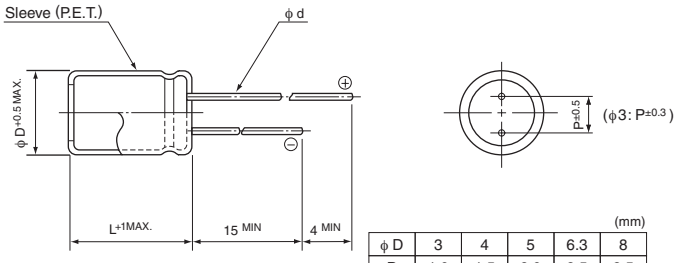




■Specifications

Item	Performance Characteristics
Category Temperature Range	−40 to +85°C
Rated Voltage Range	4 to 50V
Rated Capacitance Range	0.1 to 470μF
Rated Capacitance Tolerance	±20% at 120Hz, 20°C
Leakage Current	After 2 minutes' application of rated voltage at 20°C, leakage current is not more than 0.01CV or 3(μA), whichever is greater.
Tangent of loss angle (tan δ)	Measurement frequency : 120Hz at 20°C Rated voltage (V): 4 / 6.3 / 10 / 16 / 25 / 35 / 50 tan δ (MAX.): 0.35 / 0.24 (0.30) / 0.20 (0.24) / 0.16 (0.20) / 0.14 (0.18) / 0.12 (0.16) / 0.10 (0.13) Figures in ( ) are for MR series.
Stability at Low Temperature	Measurement frequency : 120Hz Rated voltage (V): 4 / 6.3 / 10 / 16 / 25 / 35 / 50 Impedance ratio ZT / Z20 (MAX.) Z−25°C / Z+20°C: 7 / 4 / 3 / 2 / 2 / 2 / 2 Z−40°C / Z+20°C: 15 / 8 / 6 / 4 / 4 / 3 / 3
Endurance	The specifications listed at right shall be met when the capacitors are restored to 20°C after the rated voltage is applied for 2000 hours at 85°C. Capacitance change: Within ±20% of the initial capacitance value (MR series & φ3 product : Within ±25%) tan δ: 200% or less than the initial specified value Leakage current: Less than or equal to the initial specified value
Shelf Life	After storing the capacitors under no load at 85°C for 1000 hours and then performing voltage treatment based on JIS C 5101-4 clause 4.1 at 20°C, they shall meet the specified values for the endurance characteristics listed above.
Marking	Printed with white color letter on black sleeve.

■Radial Lead Type



(mm)

φ D	3	4	5	6.3	8
P	1.0	1.5	2.0	2.5	2.5
φ d	0.4	0.45	0.45	0.45	0.45

• Please refer to page 20 about the end seal configuration.

Type numbering system (Example : 25V 10μF)

1	2	3	4	5	6	7	8	9	10	11	12
U	M	A	1	E	1	0	0	M	D	D	

※2 Size code

φ D	Code
3	2
4 to 8	——

Configuration ※1
Capacitance tolerance (±20%)
Rated capacitance (10μF)
Rated voltage (25V)
Series name
Type

※1 Configuration

φ D	Pb-free leadwire Pb-free PET sleeve
3	CD
4 to 8	DD

※ 2 In case at φ 3 units, put 2 as size code.

■Dimensions

Cap.(μF) \ V / Code	4 / 0G		6.3 / 0J		10 / 1A		16 / 1C		25 / 1E		35 / 1V		50 / 1H	
0.1	0R1												4×5(3×5)	1.0(1.0)
0.22	R22												4×5(3×5)	2.0(2.0)
0.33	R33												4×5(3×5)	2.8(2.8)
0.47	R47												4×5(3×5)	4.0(4.0)
1	010												4×5(3×5)	8.4(8.0)
2.2	2R2										3×5	8.4	• 4×5	13(10)
3.3	3R3								3×5	10	• 4×5	15(10)	4×5	17
4.7	4R7						3×5	10	• 4×5	16(12)	4×5	18	5×5	20
10	100		3×5	15			• 4×5	23(18)	5×5	27	5×5	29	6.3×5	33
22	220	3×5	19	• 4×5	28(21)	5×5	33	5×5	37	6.3×5	42	6.3×5	46	□ 8×5	52(48)
33	330	4×5	28	5×5	37	5×5	41	○ 6.3×5	49(43)	6.3×5	52	□ 8×5	62(52)	8×5	71
47	470	4×5	33	5×5	45	○ 6.3×5	52(43)	6.3×5	58	□ 8×5	70(62)	8×5	80		
100	101	5×5	56	○ 6.3×5	70(68)	□ 8×5	80(76)	□ 8×5	92(86)	8×5	110				
220	221	6.3×5	96	□ 8×5	110(90)	8×5	135								
330	331	8×5	145	8×5	170									Case size φD×L (mm)	Rated ripple
470	471	8×5	185												

Size φ3 × 5 is available for capacitors marked. "●"/ Size φ5 × 5 is available for capacitors marked. "○"
Size φ6.3 × 5 is available for capacitors marked. "□" In such a case, M R will be put at 2nd and 3rd digit of type numbering system.

Rated ripple current (mArms) at 85°C 120Hz
( ) = φ3 units and MR series.

●Frequency coefficient of rated ripple current

Frequency	50 Hz	120 Hz	300 Hz	1 kHz	10 kHz or more
Coefficient	0.70	1.00	1.17	1.36	1.50

Please refer to page 20, 21, 22 about the formed or taped product spec.
Please refer to page 4 for the minimum order quantity.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Nichicon:

UMA1H0R1MDD UMA1H100MDD UMA1H100MDD1TP UMA1E3R3MCD2 UMA1E470MDD UMA1H220MDD UMA1H2R2MDD UMA1HR33MDD UMA1V4R7MDD UMA1E4R7MDD UMA1H010MDD UMA1H4R7MDD UMA1V3R3MDD UMA1V470MDD UMA1H330MDD UMA1H3R3MDD UMA1V220MDD UMA1V2R2MCD2 UMA1V330MDD UMA1HR47MDD UMA1V100MDD UMA1H100MDD1TE UMA1H330MDD1TP UMA1E3R3MCD2TP UMA1H2R2MDD1TP UMA1V470MDD1TP UMA1H3R3MDD1TP UMA1H010MDD1TP UMA1E4R7MDD1TP UMA1HR47MDD1TP UMA1E330MDD1TP UMA1E470MDD1TP UMA1H4R7MDD1TP UMA1V100MDD1TP UMA1V3R3MDD1TP UMA1V330MDD1TP UMA1HR22MDD1TP UMA1V2R2MCD2TP UMA1H220MDD1TP UMA1V220MDD1TP UMA1H0R1MDD1TP UMA1HR33MDD1TP